

A²⁰

and

a decision step of deciding start of a maintenance operation inside the chamber;

B

a supply step of supplying a prescribed area inside the chamber with clean, dry air,

if the start of the maintenance operation ha been decided by said decision step.

A²¹

Sub B7 18. (Amended) The method according to claim 16, wherein the start of the maintenance operation is decided in said decision step if an open/close sensor for sensing opening and closing of a panel, which is provided in an outer wall of the chamber, senses that the panel has been opened.

B

REMARKS

Applicant requests favorable reconsideration and allowance of the subject application in view of the preceding amendments and the following remarks.

To place the subject application in better form, the specification has been amended to provide clarification. A new abstract has also been presented in accordance with preferred practice. No new matter has been added by these changes.

Claims 1, 3-16, and 18-33 remain pending in this application. Claims 4-15 and 19-33 have been withdrawn from consideration. Of the claims still under consideration, Claims 1 and 16 are independent. By this Amendment, Applicant has amended Claims 1, 16, and 18, and canceled Claims 2 and 17.

Claims 3 and 18 stand rejected under 35 U.S.C. § 112, first paragraph. Specifically, the Office Action states that those claims are not enabled because the decision for starting maintenance is described in the specification as preceding the opening of the panel, rather than following its opening. However, the Office Action goes on to acknowledge that the abstract specifically states that a door switch is provided “for sensing that the cover has been opened” and that “[a]ctuation of the air supply unit is started in accordance with the state sensed by the door switch,” which supports the subject matter of Claims 3 and 18. In addition, Applicant also directs the Examiner’s attention to the specification at page 16, lines 5-9, which also supports those claims. Accordingly, Applicant respectfully requests withdrawal of the rejection under 35 U.S.C. § 112, first paragraph.

Claims 1-3 and 16-18 stand rejected under 35 U.S.C. § 103 as being unpatentable over Semiconductor Equipment and Materials International Publication No. S2-0302 (SEMI). Applicant traverses this rejection.

As recited in independent Claim 1, Applicant’s invention is directed to a semiconductor manufacturing apparatus having purging means, decision means, and supply means. The purging means purges inert gas in an area inside a chamber. The decision means decides the start of a maintenance operation inside the chamber. The supply means supplies a prescribed area inside the chamber with clean, dry air, if the start of the maintenance operation has been decided.

Independent Claim 16 is directed to a method of controlling a semiconductor manufacturing apparatus, and recites steps generally corresponding to the functions of the means recited in independent Claim 1.

Thus, by the present invention, a worker may be protected from suffocation by having the manufacturing apparatus provide clean, dry air to the chamber in which maintenance is performed.

The SEMI document describes exhausting and ventilating a chamber so as to prevent a human from exposure to hazardous chemicals. Thus, that document describes exhausting the toxic chemicals so that the chemicals no longer remain in the designated space. Rather than just exhausting a chamber, the present invention supplies clean, dry air into a chamber. This is possible because the inert gas in the chamber is not toxic and does not need to be fully exhausted before maintenance.

Accordingly, Applicant submits that the SEMI document fails to describe or suggest supplying a prescribed area inside a chamber with clean, dry air, if a start of a maintenance operation has been decided, as recited in independent Claims 1 and 16.

For the foregoing reasons, Applicant submits that the independent claims are allowable over the applied document, and requests withdrawal of the rejection under 35 U.S.C. § 103.

The remaining claims in the present application still under consideration are dependent claims which depend from the independent claims discussed above, and thus are patentable over the documents of record for reasons noted above with respect to those claims. In addition, each recites features of the invention still further distinguishing it from the applied document.

Applicant requests favorable and independent consideration thereof.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should be directed to our address listed below.

Respectfully submitted,



Attorney for Applicant
Justin J. Oliver
Registration No. 44,986

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200

SEW/eab

**VERSIONS WITH MARKINGS TO SHOW
CHANGES MADE TO THE CLAIMS**

1. (Amended) A semiconductor manufacturing apparatus comprising:
purging means for purging inert gas in an area inside a chamber;
decision means for deciding start of a maintenance operation inside [a] the
chamber; and
supply means for supplying a prescribed area inside the chamber with [a gas that
contains oxygen] clean, dry air, if the start of the maintenance operation has been decided by said
decision means.

16. (Amended) A method of controlling a semiconductor manufacturing apparatus,
comprising:
a purging step of purging inert gas in an area inside a chamber;
a decision step of deciding start of a maintenance operation inside [a] the
chamber; and
a supply step of supplying a prescribed area inside the chamber with [a gas that
contains oxygen] clean, dry air, if the start of the maintenance operation ha been decided by said
decision step.

18. (Amended) The method according to claim 16, wherein the start of the maintenance operation is decided in said decision step [decides start of the maintenance operation if a panel, which is provided in an outer wall of the chamber, is sensed to have been opened by] if an open/close sensor for sensing opening and closing of [the] a panel, which is provided in an outer wall of the chamber, senses that the panel has been opened.